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ABSTRACT

This document discusses the development of post-secondary education in Ontario from 1870 to 1963 with particular emphasis on the postwar expansion that took place after 1945. In addition, the present and future of the Ontario education systems are discussed, specifically as related to university education, teacher education, secondary education, technological education and adult education. (HS)

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# THE STRUCTURE OF POST-SECONDARY EDUCATION IN ONTARIO

Supplementary Report No. 1 of the
Committee of Presidents of
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and Colleges of Ontario

JUNE, 1963

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# THE STRUCTURE OF POST-SECONDARY EDUCATION IN ONTARIO

*Supplementary Report No. 1 of the*
*Committee of Presidents of Provincially Assisted Universities and Colleges of Ontario*

June, 1963

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# THE STRUCTURE OF POST-SECONDARY EDUCATION IN ONTARIO

## 1. INTRODUCTION

The events of the past twelve months have revealed the extraordinary interest of the people of Ontario in the development and expansion of the educational system at the post-secondary level. All the existing universities have agreed to accelerate their plans for increasing enrolment, and three new colleges will be in operation by 1965—Trent at Peterborough, Brock at St. Catharines, and Scarborough at the eastern fringe of Metropolitan Toronto; another college to the west of Toronto, which the University of Toronto has agreed to establish, is scheduled to open in 1966. In addition, the Government has decided to expand the Federated Colleges of the Department of Agriculture at Guelph into a full-fledged university. A further innovation of great significance is the decision to raise the status of the Ryerson Institute of Technology by making it the Ryerson Polytechnical Institute with its own independent board of governors, a development to which other technical institutes can look forward in due course.

The changes have not, however, been limited to structural reorganization and long-range planning. Both the steam-shovels and the architects' protractors have been active. New buildings are arising on all the older campuses, and new campuses are beginning to take shape at Laurentian, York, Trent and Scarborough. Plans for a new Teachers' College in Sudbury and a new College of Education in London have been announced. The capacity of Ryerson has been substantially increased in the past year, and facilities are being extended at the other technical institutes. The number of Provincial Institutes of Trades is being doubled, from three to six.

All these various developments have taken place as the result of much discussion and debate. Some have been suggested by such reports as *Post-Secondary Education in Ontario 1962–1970* and the *Report of the Select Committee on Manpower Training*. But no suggestion has been adopted lightly. The financial implications of each development are far too serious to be entered into casually or uncritically.

But despite the extraordinary number and range of the developments which have occurred in the past twelve months there have also been suggestions that the system is not being expanded quickly enough, or that it is not being expanded in the proper directions. In particular there have been pleas for the addition of a Grade 14 to the secondary schools, and, alternatively, for the introduction of junior colleges, either two-year

colleges from Grade 12 or two-year colleges from Grade 13. Since the junior college is a striking characteristic of the educational systems of many American states, it is not surprising that its adoption or adaptation should be suggested for Ontario.

We propose in this report to review briefly the historical development of the Ontario educational system, so that the various possibilities for further development may be considered in the light of the structure which has evolved in this Province—a structure which differs in many important respects from those in other jurisdictions.

Confusion besets the current debates about educational development because people mean different things by the terms they use. We have accordingly set down some definitions that we believe will be useful to clarify the different types of educational institutions and the levels of education they represent.

A *university* is a multi-faculty institution with a faculty of arts and science and at least one professional faculty, which offers instruction to the baccalaureate level and beyond that level at least to the master's and normally to the doctorate. A university may be supported from public funds, from private sources such as endowments or denominational grants, or—as is universal in Ontario—by a combination of public and private support. It is the most expensive of educational institutions, since it requires a highly qualified staff, a high ratio of staff to students, and facilities for specialized instruction. Most if not all university teachers are simultaneously engaging in research (hence the term "community of scholars"). Therefore, most if not all university teachers have either carried their own formal education well beyond the bachelor's level, or else their experience, accomplishments and publications have been of a superior order, commanding respect in the world of scholarship. Studies "at the university level" are studies directed by a staff with the qualifications described above, requiring libraries and laboratories of considerable complexity and cost. Universities grant general, honour, professional and postgraduate degrees, and sometimes also diplomas and certificates for shorter courses. A degree is an attestation that a student has met the requirements for permanent membership in the university at the bachelor's, master's or doctor's level.

A *liberal arts college* is an institution primarily concerned with providing undergraduate programmes leading to the B.A. and B.Sc. degrees, but not normally offering professional or advanced graduate work. A college may be affiliated or federated with a university; it may hold full degree-granting powers by statute but may agree to hold certain of these powers in abeyance during its period of affiliation or federation. A college may eventually develop into a university, or it may prefer to concentrate

on college work of a high order, as Amherst, Wellesley and others in the United States have done. Colleges may be supported by private or public funds, or both. In Canada some institutions that are called universities are really liberal arts colleges.

A *junior college* is an institution offering a two-year programme beyond Grade 12 which can carry a student to a level two years below a general B.A. or B.Sc. degree. There are very few junior colleges in Canada. In the United States, where they are numerous, they may be under private or public auspices, they may have selective or unselective admission standards, and they may give remedial, terminal and adult courses, or any combination of these, in addition to the transfer courses leading to university. Remedial courses repeat the work of earlier grades; terminal courses may be one, two or three-year courses in a wide selection of commercial, semi-vocational or vocational subjects, at many different levels. Some junior colleges grant the degree of "Associate in Arts". A *community college* is a junior college which gives particular attention to adult and vocational training for the community in which it is located. There are none in Canada, but there has been an extensive development of them in a number of American states.

An *institute of technology* is an institution offering two or three-year courses beyond Grade 12 in various technical and commercial fields and in applied arts. The courses are designed to meet the educational requirements of the large group of able young people whose interests and abilities are pointed towards technological rather than fully professional careers; the courses lead to a recognized status within the field, e.g., "engineering technologist", "food supervisor". The best example of an institute of technology in Ontario is the Ryerson Institute.

An *institute of trades*, or trades school, is an institution offering vocational courses to prepare people for immediate employment either as apprentices in the apprenticeship trades or as technicians or mechanics in certain other trades such as watchmaking and welding. It is well designed for the re-training of adult workers. The admission requirement may be as low as Grade 8 and can be as high as Grade 11.

This list omits many types of institution such as Teachers' Colleges and hospital schools of nursing whose functions are clear-cut and well known.

## 2. THE STRUCTURE OF EDUCATION IN ONTARIO

The educational system of Ontario is a complex of more than 5,000 interrelated parts—schools, colleges, institutes, universities—providing instruction in the six areas into which education in the twentieth century is commonly divided: elementary, secondary, teacher training, technologi-

cal, higher, and adult. Though clearly distinguishable from one another, these six areas are mutually interdependent: for example, all the five last-mentioned areas draw their enrolment from the elementary schools, and the elementary schools in turn depend upon secondary schools, teacher training colleges, technological institutes and (at one remove) universities for their teachers, and upon adult education for the maintenance of informed and interested public attitudes. The consequence of this interdependence is that no single area can be regarded in isolation; the system is an organic whole.

When we examine the organic whole that is the Ontario system of education, we find that it differs in certain respects from the systems which have developed in neighbouring provinces and states. This is to be expected; the Ontario system has evolved over a period of 150 years in response to economic, political and social conditions which did not obtain in other jurisdictions. These conditions have determined the kind of educational system that we have, and it is therefore to the past that we must turn to understand why we have the kinds of institution that constitute our present system, and not others. The story of the Ontario system is that of a steady growth up to 1939, followed by an explosive expansion in the years since the second World War—the effect of the higher birth rate and heavy immigration, combined with a new tendency to prolong the period of formal education. But this expansion was not a break in the continuity of growth; it was based on the dimensions of the system as it had developed by 1939.

*Development, 1870–1939*

Our situation today would be very different had certain things *not* happened in the 1870's. The 1871 Act to Improve the Common and Grammar Schools of the Province of Ontario (the work of Dr. Egerton Ryerson) established two types of secondary school—a *high school*, which would provide, for the majority of students, "the higher branches of an English and commercial education, including the natural sciences with special reference to agriculture"; and a *collegiate institute*, a "superior classical school" that would concentrate upon the academic programme leading to university matriculation. But the distinction between the high school and the collegiate institute almost immediately broke down. By 1883 the academically-oriented programme was dominant in both, and the only differences between them were that the high schools had smaller enrolments and the collegiate institutes had a specified number of specialist teachers on their staffs. Whether the reason for the breakdown of this distinction was a desire for the greater prestige (and larger

subsidy) that accrued to the collegiate institute, or a determination in the smaller towns to prevent the larger ones from supplying more than their share of the university students, or a deep-rooted belief in academically-oriented secondary education, or a combination of all these, the consequence was that the collegiate institute pattern became the norm, and for over twenty years no attempt was made to develop any of the secondary schools into the type of institution that combined general education with some vocational elements.

The introduction of the specialist certificate as the qualification of the teacher in a collegiate institute had profound effects on the Ontario system of education. By the 1890's this certificate had become identified with graduation in an honour course from a university—an identification which strengthened the position of the honour courses in Ontario universities, and indirectly led to the establishment of a fifth or senior matriculation year in the secondary schools. The general, fixed, ordinary or pass B.A. (to give it its various names) was a four-year course from junior matriculation, that is, from a four-year high school programme. The honour B.A. was also a four-year course, but admission was from senior matriculation (which at one stage required two additional high school years beyond junior matriculation, but was reduced in 1921 to one additional year). In time, the senior matriculation course became synonymous with the first year of the pass B.A. course and the universities began to admit students with their senior matriculation to the second year of the pass B.A. course. Increasingly this became the normal procedure. In 1931 the University of Toronto made senior matriculation a requirement for admission to all courses, and its pass or general B.A. became officially a three-year course. The other major Ontario universities soon did the same, and today the three-year general B.A. from senior matriculation is practically universal. Hence the senior matriculation year (Grade 13) became an integral and important part of the Ontario system. It is not found in the United States, in the British Isles, or in most other Canadian provinces.

Thus the collegiate institute pattern and the Grade 13 year became generally adopted throughout the Province except in the smallest schools. This differentiated the Ontario system sharply from its English antecedents: it democratized and decentralized the opportunities for university education. The English public (i.e., private) school was introduced into Ontario only sparsely, the English-type grammar school and the 11-plus examination not at all. Ontario was university-conscious, and, moreover, believed in the value of an academic education whether it was prolonged beyond the secondary school or not. Any suggestion that

the university-preparatory function did not belong in the ordinary secondary schools has never been acceptable to the people.

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A second important development of the 1870's was the establishment by the Province of two institutions at the technological level, the College of Technology at Toronto in 1872 and the Ontario Agricultural College at Guelph in 1874. There was a great deal of argument at the time these institutions were being launched as to whether they should be technological or professional, that is, whether they should be designed to produce technologists and farmers or professional engineers and agronomists. The College of Technology began as an evening school for mechanics, but by 1875 it had become the School of Practical Science, affiliated with the University of Toronto and offering a three-year university level course. In 1877 it was physically moved to the Toronto campus, and in due course it became the university's Faculty of Applied Science and Engineering. At the Ontario Agricultural College, on the other hand, a compromise was sought and achieved; from the start there were offered two distinct courses, a two-year diploma course and a three- (later four-) year degree course. Both courses continue to be offered to this day, and it can be said that the Ontario system has made provision for both the professional and the technological farmer since the 1870's. In contrast, the decision to convert the College of Technology into a Faculty of Engineering, combined with the tendency of the high schools to adopt the curriculum of the collegiate institutes, created a vacuum in the area of vocational and technological education at both the secondary and the post-secondary levels.

With the twentieth century came signs of awakening interest in vocational education—household science and manual training were introduced in the schools shortly after 1900, agriculture, with a boost from the Federal Government (Agricultural Instruction Act, 1913) was extended to the secondary schools, and technical education was extensively studied by Dr. John Seath, the Superintendent of Education. His report, *Education for Industrial Purposes* (1910), was given effect in the Industrial Education Act of 1911, which authorized day and evening industrial and technical schools. In 1912 appeared the report of the federal Royal Commission on Industrial Training and Technical Education. The development of technical and commercial programmes in the schools was slowed down because of the first World War, but progressed rapidly thereafter, again with the aid of federal funds (Technical Education Act, 1919); by 1939, the kind of dual offering envisaged in the 1871 Act was generally available throughout the Province.

Industrial education had suffered from an association in the public

mind with reformatory schools like the one in Guelph, and with the trades schools for delinquent and incorrigible children at Mimico, Bowmanville and Galt. Moreover, some of the new vocational and commercial departments were used as dumping grounds for academic failures. But the excellent work done at some schools, especially Central Technical School in Toronto and Hamilton Technical School, brought about a better understanding of the potential of vocational training and the gradations in its level and complexity. No post-secondary technological institutes were established between 1900 and 1939 except for the Ontario College of Art, but interest in them was increasing, and plans were being made for an institute of mining technology in the north. If the technical-commercial element had been introduced at an earlier date in the secondary schools, it is conceivable that a network of technological institutes might have been built in the period between the two wars; but this did not occur.

"Historically," says the recently published report of the Select Committee on Manpower Training, "we in Ontario have tended to emphasize academic preparation, often at the expense of vocational education and training." This tendency has hindered the recognition of industrial specializations and skills, and has retarded the development of technical education, especially at the post-secondary level. It was the instinct of our grandfathers to postpone the job-learning until after the book-learning was done, and they were slow to realize that the increasing complexity of commercial and industrial enterprises and the decline of the apprenticeship system were shifting additional responsibilities on to the schools. But their preoccupation with academic studies gave the Ontario school system an academic tradition for which we should be grateful—especially now that the latest developments in industry involve for all workers the need for better grounding in the academic fundamentals.

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Teacher training in Ontario has been characterized by a distinction between the arrangements for the training of elementary school teachers and those for secondary school teachers. To be fully qualified, the latter, as we have seen, had to be university graduates and were "specialists" if they had taken the appropriate honour course. Their need for additional professional training was very slowly accepted; after many expedients had been tried and abandoned, a one-year professional course was established at Hamilton in 1897, in the Ontario Normal College; its work was taken over between 1907 and 1920 by Faculties of Education at Toronto and Queen's, and was centralized in 1920 at the Ontario College of Education, Toronto. For elementary school teachers, on the other hand, a degree was not required; they took a year of professional training

following graduation from high school. Until 1908 most of them were trained in County Model Schools, a few at the Normal Schools at Toronto, Ottawa and London; with the discontinuance of the Model Schools in 1908, four additional Normal Schools were built at Hamilton, Peterborough, Stratford and North Bay. These seven, and a school for teachers for French-speaking pupils established at the University of Ottawa in 1927, had a total of 1,240 students in 1939. The elementary school enrolment at that time was about 500,000, and the secondary school enrolment about 120,000. Training for shop instructors and other technical school teachers was started in 1917 in evening courses, supplemented in 1921 by summer courses; then the Ontario Training College for Technical Teachers was opened in Hamilton in 1925, and continued to operate until the early years of the war.

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In 1939 there were five universities in Ontario—Toronto, Queen's, Ottawa, Western and McMaster—with a total enrolment of about 11,000 full-time students, of whom about 7,000 were at Toronto. All offered three-year general and four-year honour courses in arts and science. Professional education was limited to theology (all the universities having more or less close connections with theological education), medicine (Toronto, Queen's, Western), engineering (Toronto, Queen's), nursing (Toronto, Ottawa, Western), public health (Toronto, Western), dentistry, pharmacy, architecture, forestry and social work (Toronto). All the universities gave graduate work to the M.A., Toronto also to the Ph.D. in some fields. Toronto and Western were undenominational centres with church-related affiliates, and Western also had affiliated denominational arts colleges at Windsor and Waterloo. McMaster had an affiliated college in Manitoba (Brandon College), and Ottawa had seventeen affiliated *collèges classiques*, the majority outside the Province. The agricultural and veterinary colleges at Guelph had an academic connection with Toronto but were financed through the Department of Agriculture. The Department of Education paid the full expense of the Ontario College of Education and the Library School at Toronto.

The only systematic liaison among the Ontario universities was about matriculation standards, through the Ontario Matriculation Board (organized in 1909 by Toronto, Queen's, McMaster and Western to control the pass and honour matriculation examinations) and the Matriculation Conference, a larger body that discussed prescriptions, text-books, relationships with the private schools and many other matters; though this was only a deliberative body, making recommendations to the various university senates and to the Department of Education, it

had an effective and influential existence from 1910 to 1951. Apart from this there was little contact among the universities, and no formal co-ordination of programmes on a province-wide basis.

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The striking characteristic of adult education in the Ontario system by 1939 was the lack of institutions primarily concerned with this work. This was not the case in the nineteenth century when many communities had Mechanics' Institutes; but, with the possible exception of the Workers' Educational Association, whose efforts have never been rewarded with the success they deserve, it has been the case since the absorption of the Mechanics' Institutes in the public libraries in 1881—for the public library is concerned not with offering instruction but with providing service. In the main, the work in adult education was carried on by the universities, the school boards, and also to some extent the Department of Education itself. The programmes offered by the universities and the school boards were essentially similar to their regular programmes—extramural academic credit and non-credit courses were offered by the universities, and Grades 7 to 13 academic courses and some technical-vocational and commercial courses by the school boards.

*Postwar Expansion, 1945–1963*

The end of the second World War was the signal for a huge expansion in education. It had been, in many respects, a technological war, and among the returning veterans were many who had achieved a mastery of complicated technical operations. Moreover, the educational services available to the troops during the long periods many of them spent in Britain had been well organized, and they came back with educational ambitions; and the educational benefits provided by the Federal Government were generous. The impact of the veterans was felt at the post-secondary level. Thousands came to the universities: in 1947 there were over 15,000 undergraduate ex-service students in the Ontario universities. Matriculation courses and a wide variety of vocational courses were offered at the Ontario Training and Re-establishment Institute in the old Toronto Normal School building, and this ushered in an extensive development of technological education.

When the universities, and the Department, had a chance to draw breath and assess the situation, they found that changes had taken place in the educational pattern that would not be reversed after the veterans had been taken care of. The universities of Ontario had had about 11,000 undergraduates in 1944, and the influx of veterans had tended to obscure the fact that the *non-veteran* undergraduate enrolment was increasing spectacularly—to 15,000 in 1948, 17,000 in 1949, 18,000 in 1950, 20,000

in 1955. At the same time, post-secondary technological education was at last coming into its own; the long-projected Institute of Mining was founded at Haileybury in 1945, followed in 1946 by the Hamilton Institute of Technology which stressed advanced work in textiles and the Lakehead Institute which specialized in mining and forestry, and in 1948 the Ontario Training and Re-establishment Institute became the Ryerson Institute of Technology. Meanwhile, the postwar babies were swelling the enrolment of the elementary schools, which involved an expansion of the normal schools to train sufficient teachers. The secondary schools took this wave of larger enrolments from about 1960, with a corresponding pressure on the Ontario College of Education; but even before this the tendency of students to stay longer in school had increased the pressures at the secondary level.

Ontario responded to this extraordinary challenge of expansion on every front; places were found for the greatly increased numbers of students at every level. However, this was done not by co-ordinated planning but by a series of more or less unrelated expansion programmes at various levels to meet the needs as they arose.

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The elementary schools, which had had about 500,000 pupils in 1939, have been increased to accommodate 1,200,000. The normal schools (re-named Teachers' Colleges in 1953) effected an extraordinary expansion of numbers (Table 1). In the last two years the number of applicants

TABLE I

ENROLMENT IN TEACHERS' COLLEGES

| | 1939–40 | 1959–60 | 1960–61 | 1961–62 | 1962–63 |
|---|---|---|---|---|---|
| Toronto (1847) | 339 | 1,190 | 1,217 | 1,026 | 922 |
| Ottawa (1877) | 133 | 619 | 710 | 676 | 632 |
| London (1900) | 162 | 932 | 1,009 | 910 | 501 |
| Hamilton (1908) | 117 | 843 | 908 | 889 | 741 |
| Peterborough (1908) | 94 | 378 | 464 | 402 | 370 |
| Stratford (1908) | 108 | 373 | 450 | 377 | 343 |
| North Bay (1909) | 102 | 423 | 412 | 423 | 382 |
| U. of Ottawa (1927) | 185 | 384 | 364 | 358 | 302 |
| Lakeshore (1959) | — | 809 | 989 | 766 | 612 |
| Lakehead (1960) | — | — | 207 | 231 | 215 |
| Windsor (1962) | — | — | — | — | 494 |
| | 1,240 | 5,951 | 6,730 | 6,058 | 5,514 |

for training in the Teachers' Colleges has declined, and consequently their output has dropped; however, a large number of married women have returned to teaching. The burgeoning enrolments in the elementary

schools have been looked after, partly through emergency summer sessions at the Teachers' Colleges, but this has been done at the cost of some dilution of the quality of elementary education, because for about ten years the minimum requirement for admission to the Teachers' Colleges has been Grade 12 instead of Grade 13; the higher requirement is now being gradually reinstated. Besides the greater immaturity of a teaching cadre drawn largely from Grade 12 rather than from Grade 13, the employment of large numbers of unqualified personnel teaching with Letters of Permission has had an adverse effect. The numbers of Letters of Permission are being reduced—they declined from 1,176 in 1959–60 to 936 in 1961–62—but the pace is discouragingly slow.

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Secondary school enrolment has increased since 1939 from 120,000 to 330,000. A very significant change during this period has been the consolidation movement: the benefits offered by larger schools, and the choice between academic and vocational programmes, have been greatly extended in their scope during and since the 1940's by the consolidation of small country schools into district high schools. The extent and rapidity of this development can best be seen in the numbers of pupils transported to and from school: 1,600 in 1943–44, 17,000 in 1948–49, 70,000 in 1961–62.

The Federal-Provincial Technical and Vocational Training Agreement made federal aid available for vocational education on a generous scale. As a result of this, a very large building programme has been in operation for the past three years, providing more facilities for vocational and commercial education in the secondary schools. The reorganized secondary school programme (the "Robarts Plan") was introduced in Grade 9 on September 4th, 1962; it provides for well-defined "streaming" of pupils into academic, commercial and technical programmes, with terminal two-year and four-year courses and with five-year courses leading to further education.

The most serious problem of the secondary schools at the present time is the shortage and maldistribution of well-qualified teachers in the basic academic subjects. This applies both to the "Type A" specialists who have taken honour courses and to the "Type B endorsed" who have done some measure of concentration in their general course. Taking as examples English and Mathematics, which are key subjects for all secondary school pupils, the following situation exists in the Ontario secondary schools in 1962–63: of the 457 public secondary schools in the Province, 209 have not one Type A specialist in English on their staff, and 101 of these have not even a holder of a Type B endorsed certificate in English;

in other words, nearly one-quarter of our schools have no teacher of English whose academic qualifications are even remotely adequate for teaching English in the higher grades. These 101 schools enrol nearly 30,000 secondary school pupils, or about one-tenth of the secondary school enrolment in the Province. In Mathematics the situation is even worse: 218 schools have no Type A Mathematics teacher, and 151 of these have neither a Type A nor a Type B endorsed Mathematics teacher; almost 50,000 pupils are in these 151 schools, comprising 15% of the total secondary school enrolment. Table 2 illustrates the distribution of the teachers with the qualifications mentioned above. No doubt the maldistribution of good teachers is, in part, a result of the same trend to urbanization that is making it hard for small towns to keep doctors and dentists. But the main cause is the over-all shortage of specialist teachers; the larger cities and their suburbs have outbid the smaller centres for a scarce commodity.

TABLE 2

DISTRIBUTION OF ENGLISH AND MATHEMATICS TEACHERS

| ENGLISH | | |
|---|---|---|
| Number of teachers with B-endorsed or A certificates in English per school | Number of schools | Number of teachers |
| 0 | 101 | — |
| 1 | 109 | 109 |
| 2–3 | 133 | 329 |
| 4–10 | 114 | 655 |
| | 457 | 1,093 |

| MATHEMATICS | | |
|---|---|---|
| Number of teachers with B-endorsed or A certificates in Mathematics per school | Number of schools | Number of teachers |
| 0 | 151 | — |
| 1 | 101 | 101 |
| 2–3 | 137 | 316 |
| 4–9 | 68 | 365 |
| | 457 | 782 |

The shortages just described—which are also acute in the science subjects—reflect among other things the increased competition of other professions for university graduates. There has been no reduction of the academic requirements for admission to the Ontario College of Education, but the proportion of applicants who are honour graduates has decreased. The Ontario College of Education, besides a considerable expansion at Toronto, has instituted summer courses at London and

Kingston; a new College of Education will open in London in 1965 operated by the University of Western Ontario, and another is planned for the eastern part of the Province.

Ontario's programme for educating secondary school teachers has developed in a different way from those commonly found in North America. Elsewhere, secondary school teachers often take their professional training concurrently with their academic education, as, for example, in the Bachelor of Education course at the University of Alberta. A committee appointed by the Minister of Education for Ontario has recently made an intensive study of this topic, and its report comes down unequivocally in favour of the Ontario system.

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Institutes of Technology have played an increasingly important role in the educational system since 1939. Their enrolment has increased by about 1,000 in the last two years (Table 3). The figures of Table 3 do

TABLE 3

ENROLMENT IN INSTITUTES OF TECHNOLOGY

| | 1960–61 | 1962–63 |
|---|---|---|
| Provincial Institute of Mining (1945) | 82 | 87 |
| Hamilton Institute of Technology (1946) | 258 | 382 |
| Lakehead Technology Division (1946) | 75 | 124 |
| Ryerson Institute of Technology (1948) | 2,134 | 2,508 |
| Eastern Ontario Institute of Technology (1957) | 337 | 522 |
| Western Ontario Institute of Technology (1958) | 180 | 330 |
| Northern Ontario Institute of Technology (1962) | — | 76 |
| | 3,066 | 4,029 |

not include the enrolments in first year Ryerson classes in 1962–63 at some secondary schools in London and Toronto. At Ryerson, the greatest recent growth has been in the non-engineering courses; about half the students are now enrolled in the Business, Merchandising and Hotel Administration, Printing Management and Secretarial Science courses, in Home Economics, and in Journalism, Photographic Arts, and Radio and Television Arts.

Originally all the Institutes of Technology in Ontario were controlled directly by the Department of Education. The first to become independent was the Lakehead Institute, which became the Lakehead College of Arts, Science and Technology, with its own board of governors, offering university courses in arts and science as well as two-year technological courses in forestry, mining, and industrial chemistry. Recently it has been announced that Ryerson is to become Ryerson Polytechnical Institute,

with an independent board of governors. The others operate under departmental control, with advisory committees including representation from local industry; their communities have not been otherwise greatly involved in their operation. The Minister of Education has said that as they mature they will be given their own independent boards.

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The five universities of 1939 have become fifteen in 1963; Windsor, Waterloo and Waterloo Lutheran developed from the colleges affiliated with Western, York as an affiliate of Toronto, Lakehead from the Lakehead Technological Institute, Carleton from an evening college started under Y.M.C.A. auspices, Laurentian from a *collège classique*; Guelph is to be based on the O.A.C.–O.V.C.–Macdonald Institute group; Trent and Brock have been chartered *de novo*. The development of professional and graduate work has been enormous: there are eight more engineering schools, four new law schools, and significant increases in business administration, physical and health education, social work and other professional and semi-professional fields. Graduate work has increased markedly at Toronto, Western, Queen's, McMaster and Ottawa, has been initiated at Carleton, Waterloo and Windsor; these developments are likely to be accelerated as a result of the Provincial Government's programme of support for graduate studies starting in 1963–64. Clearly the range and sophistication, as well as the capacity, of the Ontario university system has increased phenomenally since the war.

The presidents of the provincially assisted universities have formed a committee which effects a certain amount of liaison among its members and between its members and the Government. In 1962 it made a comprehensive report to the Advisory Committee on University Affairs with several major recommendations about the development of post-secondary education, many of which have since been implemented by the Government of Ontario.

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The enrolment in evening classes held in the secondary schools has grown to over 100,000, and in the university evening classes it is between 80,000 and 100,000. The only major new developments in adult education since 1939 have been the evening classes at the institutes of technology—during this past year there were 4,200 taking evening classes at Ryerson and approximately 800 at the other institutes—and the establishment of the Community Training Branch of the Department of Education, which caters to the needs of immigrants, notably for instruction in the English language.

## 3. THE PRESENT SITUATION

*University Education*

The report of the Ontario Presidents entitled *Post-Secondary Education in Ontario, 1962–1970* made recommendations for the expansion of existing universities and the establishment of liberal arts colleges that were based upon projections of university enrolment compiled by Dr. R. W. B. Jackson in January, 1962. In the fall of 1962 Dr. Jackson compared his projected figures for each grade in the elementary and secondary schools with the actual enrolments, and found an over-all difference of only one-half of one per cent—the actual enrolment being 100.5% of the projected enrolment. There was, however, an unexpected feature, in that the lower grades had increased more than was expected, while the enrolment in the four top grades was from 1% to 4% less than was expected. This was surprising because the rising trend in retention rates, i.e. the tendency for more pupils to stay in school longer, had seemed to be very well established.

Subsequent researches by Dr. Jackson have shown that there was a real rise in drop-outs from the top grades in the secondary schools last year, not only numerically (which would have been merely a corollary to the larger total enrolments) but proportionately. It was very pronounced in certain urbanized counties (Waterloo, Wentworth, Metropolitan Toronto), less so in others (Carleton, Middlesex). The largest age-group concerned was the 19-and-over. There seem to be two possible explanations: the greater availability of employment consequent upon the improvement in economic conditions; and the possibility that some urban and suburban schools have been discouraging their oldest pupils from staying in school.

Since the trends in school enrolment bear directly on university planning, Dr. Jackson re-estimated the future undergraduate enrolments in May, 1963, on two assumptions: first, that the increase in drop-outs will continue (Estimate A); second, that last year's experience will prove to be a temporary phenomenon and that the long-range trend will reassert itself (Estimate B). These new estimates A and B, together with last year's Estimate 5, are set out in Table 4.

It will be noted that the actual enrolment for 1962–63 exceeded the prediction in Estimate 5 by over 500 students. The new estimates are more likely to be too low than too high.

Dr. Jackson also arranged to have very detailed projections made of the situation in the most heavily populated part of the Province. For each of the six university regions in southwestern Ontario, several estimates were made by different statistical methods; this operation was

TABLE 4

FULL-TIME ENROLMENT IN UNDERGRADUATE DEGREE AND DIPLOMA COURSES IN ONTARIO, 1961–62 TO 1970–71

NOTE: This includes O.A.C. and O.V.C., Osgoode Hall, R.M.C., St. Patrick's College, Waterloo Lutheran University, preliminary year students, theological students and others, but not Education students at Toronto.

| Year | Actual Enrolment | Percentage of cumulative 4-Year Grade 13 Enrolment | Estimated Enrolment | | |
|---|---|---|---|---|---|
| | | | Estimate 5 (1962) | Revised Estimate | |
| | | | | Estimate A[1] | Estimate B[2] |
| 1961–62 | 32,205 | 52.33 | 32,175 | — | — |
| 1962–63 | 35,660 | 50.60 | 35,100 | — | — |
| 1963–64 | — | 50.00 | 40,400 | 39,700 | 39,700 |
| 1964–65 | — | 50.00 | 46,300 | 45,300 | 45,400 |
| 1965–66 | — | 50.00 | 54,500 | 52,300 | 52,800 |
| 1966–67 | — | 50.00 | 64,500 | 60,500 | 61,200 |
| 1967–68 | — | 50.00 | 73,900 | 69,500 | 70,200 |
| 1968–69 | — | 50.00 | 82,200 | 77,400 | 78,800 |
| 1969–70 | — | 50.00 | 88,200 | 82,600 | 85,800 |
| 1970–71 | — | 50.00 | 91,400 | 85,900 | 91,600 |

[1]Estimate A based on assumption that increased drop-out rate of 1962 will continue.
[2]Estimate B based on assumption that increased drop-out rate of 1962 will be temporary and rate will return to former level.

greatly assisted by statistics furnished by the registrars of McMaster, Toronto, Waterloo and Western, showing the patterns of interregional attendance. These six estimates of potential university students by region in southwestern Ontario are in remarkably close agreement, and correspond closely with the pattern of development projected by the universities in each of the regions in question.

The new estimates of prospective undergraduate enrolment for the Province were then compared with the universities' own projections of undergraduate enrolment that had been supplied last November for the use of the sub-committee on criteria for projections. This comparison depends in part on factors for which we have no firm data: in particular, the rate of expansion of the university at Guelph whose establishment has been announced, and the prospects for new faculties of medicine, dentistry and pharmacy. However, assuming that the proposed development of arts work at Guelph is implemented speedily and that all the existing universities and colleges are enabled to carry out their plans, it appears that they will be able to handle at least the numbers in Estimate A. If a further year's experience indicates that Estimate B is more likely, it may be necessary to think of further affiliated colleges in the Toronto-York and McMaster regions, to be ready for students by 1968–69.

There may be a difficult period in the years from 1965–66 to 1967–68,

because some universities do not now believe that they can expand as quickly as they had hoped at the time when the Ontario Presidents' Report was submitted to the Government. This is understandable in view of the Government's request for a slowing down in the rate of increase of capital expenditures. (For 1963–64 the universities received only about 60% of the amount they had requested in capital grants.) There is, therefore, the greatest urgency about providing all the universities, new and old, with the capital funds they need for speedy expansion. In particular, the new Toronto colleges and the Faculty of Arts of the university to be developed at Guelph will have to get under way very rapidly indeed, since they will be required to look after very large numbers of students in the fastest-growing areas of the Province. On the whole it appears that the situation is in hand if—but only if—financial support is forthcoming *and* the enlarged and accelerated programme of graduate work is successful in meeting the problem of staff.

We should like to state our conviction that at the policy of the Provincial Government, which was enunciated by the Honourable Mr. Robarts on March 21st, 1963, that present plans call for sufficient universities for about the next fifteen years and that any new colleges should be affiliated with existing well-established institutions, is the soundest and most economical way of making university education available to all with the desire and the ability to undertake it.

*Teacher Education*

We have indicated earlier that the output of the Teachers' Colleges has been shrinking, but that the needs of the elementary schools have been met in large part by the re-employment of married women. It is reasonable to expect that the shortage of elementary school teachers will be a temporary condition, because as the larger numbers reach the stage of leaving the secondary schools, more will be available for elementary school teaching. Until that occurs it is probably not feasible to make any change in the admission requirements for the Teachers' Colleges apart from the re-institution of the Grade 13 requirement that is already taking place. Obviously the whole school system would benefit beyond description if, eventually, all the elementary school teachers had a university education.

At the secondary level, the shortage of well qualified teachers will almost certainly get worse in the next few years because the universities are trying to attract their honour graduates into graduate work and university teaching, in direct competition with the schools. It will be incumbent on the universities to arrange for many more courses, both winter and summer, for teachers who want to improve their qualifications,

and it will probably be necessary for school boards to encourage their teachers to do so, and for the government to subsidize them. An encouraging sign is that there are 400 applications for Type A summer seminars in 1963 as compared with 241 in 1962. The universities will have to bear in mind the fact that they are solely and entirely responsible for the academic preparation of secondary school teachers.

*Secondary Education*

It has already been mentioned that well-defined streaming, allowing for two-, four-, and five-year programmes, has been introduced in the Ontario secondary schools. This feature of the evolution of the school system is new and very important, reflecting as it does a shift in the viewpoint from which the system must be regarded. We think it worth while to study this development carefully, as it represents a response to social change for which the historical background of the educational system furnishes no precedent and provides little guidance.

It is traditional in this century and on this continent to define the state's primary educational responsibility as the provision of opportunity to the individual to develop his mind and talents. This is not, however, the sole responsibility. The state must also pay particular attention to certain fields and make sure that persons whose work is vital to the welfare and security of society are trained in sufficient numbers. Examples of these fields are the armed services (in Canada a federal responsibility), police, doctors, teachers, and many more. In totalitarian régimes the educational system is pressed into the service of the state rather than the individual, and this latter function of the educational system becomes primary; in democracies it is secondary. When shortages develop in the essential fields, a democracy may use persuasion, but not coercion, to produce the needed personnel.

There is now a further development of this second, or collective, responsibility, arising from the technological changes that are progressively eliminating unskilled jobs. Lack of education used to mean merely that the individual would have to be content with menial work; now it means that he will very likely become a charge on the public funds. For the well-being of society as a whole, the state must now see that as many young people as possible develop salable skills, because otherwise the problems of unemployment and delinquency will be insupportable. Here, again, a democratic state must rely on persuasion. The state can compel attendance in school to a certain age, but it cannot compel the attainment of any given level of education. Therefore it is by persuasion rather than by compulsion that the drop-out problem must be attacked. The new three-stream plan for secondary education in Ontario is an attempt to fulfil these responsibilities simultaneously.

The extent of the drop-out problem is illustrated in Tables 5 and 6, taken from the last three Minister's Reports. These show that there were

TABLE 5

DESTINATION OF PUPILS WHO LEFT THE ONTARIO ELEMENTARY AND SECONDARY SCHOOLS

| | 1959–60 | 1960–61 | 1961–62 |
|---|---|---|---|
| (a) Left school to take jobs | 41,415 | 37,022 | 44,366 |
| (b) Left school—not employed | 11,429 | 11,959 | 13,363 |
| | 52,844 | 48,981 | 57,729 |
| (c) Left for further education or training | 25,348 | 26,742 | 28,902 |
| (d) Left Ontario | 19,553 | 20,212 | 20,297 |
| (e) Death, disability, &c. | 3,687 | 4,989 | 5,245 |
| Total leaving the Ontario school system | 101,432 | 100,924 | 112,173 |

TABLE 6

ANALYSIS OF THOSE LEAVING SCHOOL, EMPLOYED AND UNEMPLOYED

| | 1959–60 | 1960–61 | 1961–62 |
|---|---|---|---|
| Left secondary school: | | | |
| with no diploma | 19,241 | 17,290 | 20,786 |
| with Intermediate Certificate | 6,657 | 5,819 | 6,797 |
| Intermediate Certificate and Grade 11 | 4,860 | 4,633 | 5,688 |
| | 30,758 | 27,742 | 33,271 |
| Sec. School Graduation Diploma, general | 3,831 | 3,915 | 4,965 |
| Sec. School Graduation Diploma, other | 5,117 | 5,421 | 6,386 |
| Honour Diploma | 806 | 914 | 1,103 |
| Left elementary school: | 12,332 | 10,989 | 12,004 |
| | 52,844 | 48,981 | 57,729 |

33,000 pupils who left secondary school last year with Grade 11 or less, and 12,000 who left elementary school. An annual influx of this magnitude into the unskilled labour market, with the number of unskilled jobs diminishing, will have social consequences of the most serious kind.

The Select Committee of the Ontario Legislature on Manpower Training, reporting in February, 1963, examined the situation of the labour force as it affects both those presently unemployed and those who are currently leaving the school system, and found no ground for complacency with either group. They say:

Reflecting the general and persistent tendency for the overall level of our skill requirements to rise, it has recently been estimated that jobs which can be filled by employees with little or no skill account for only about 30% of

employment. There is every reason to believe—based at least on our experience over the past few years—that this proportion will continue to diminish in size. . . .

Just as important as the rising level of our general skill requirements are the changes which can be expected to take place in the types of skills demanded. There will probably be an increasing need for workers with greater conceptual ability, for workers who can think through and resolve complicated problems, for workers who can analyze and synthesize. The challenge of developing this type of worker will no doubt prove more demanding than the relatively simple task of upgrading workers in the more traditional skills. (*Report of the Select Committee on Manpower Training*, Ontario Legislature, February, 1963, pp. 9, 10)

They go on to say that a clear relationship between lack of education and individual unemployment has been established; and they conclude:

In the long run, the only way to overcome this situation is to provide workers with more education and training before they actually enter the labour force. Judging by the current rate of our "drop-outs", we still have a long way to go in this regard. (p. 11)

With this analysis it would be difficult to disagree. Moreover, the Manpower Training Committee recognizes a qualitative as well as a quantitative problem in education: "More education and training by itself will solve nothing. Unless it is appropriate to the types of work our students are going to find available for them it will not serve the intended purpose" (pp. 12, 13). And on p. 18: "In order to prepare workers for the periodic retraining they may have to undergo in the future, more emphasis will have to be placed on ability to learn and ability to adapt, as opposed simply to the acquisition of a limited range of manipulative skills."

Against this background one might have expected the Manpower Training Committee to recommend that the academic side of the technical and commercial streams in the secondary schools be enriched, since there is pretty general agreement that it is academic training that produces conceptual ability, the capacity to think through and resolve complicated problems, to analyze and to synthesize. But they accepted a negative correlation between academic content and "holding power":

The increased holding power of the schools depends in large measure upon the number and variety of new vocational options. While the Robarts Plan does involve a considerable expansion in the number and variety of such options, we venture to suggest that we may eventually have to move even farther in this regard. . . . Whether (the Plan) will prove a sufficient inducement to retain the interest of those who are not academically inclined but do have the capacity to absorb four or five years of vocationally oriented schooling remains to be seen. (p. 31)

The Manpower Training Committee does recommend that vocational education be as broadly based as possible; by this they mean that training should be given in families of related occupations, in, e.g., the automotive trades as a whole rather than in any one branch of those trades; and that directly related academic subjects should be stressed.

We realize that many pupils have little interest in or capacity for academic work, but we question whether the school system is acting in their best interests if it encourages them to abandon the effort. Should we not rather be mobilizing our resources of teaching and technology from the very beginning of the elementary school course to make academic work more interesting, challenging and attractive?

The new three-stream plan is a courageous attempt to meet a new situation. We would be happier about it if we were sure that people were not making unwarranted claims for some parts of the programme. For instance, the confident assertion that each of the three five-year programmes will lead to university raises the question whether the commercial and technical courses as they are planned at present can possibly prepare their pupils for admission to university courses in Commerce and Finance, Business Administration or Engineering. We are glad to note the stated policy that "all courses are subject to such further revision as may be found desirable" (*Report of the Minister*, 1962, p. 3), and we hope that there will be continuous re-study of the plan in the light of the pupils' needs.

Another area of secondary education that deserves close attention is the use of the French language. A small beginning has been made in the introduction of French in the elementary schools; this seems likely to increase rapidly, and will bring in its train a need to consider French in the secondary schools no longer as an introduction to the language, but as training in the use of it. When we were considering the needs of the French-speaking citizens of Ontario for post-secondary education, we ran up against the fact that at present the teaching of science and mathematics in all secondary schools—including those attended by French-speaking pupils—is practically always done in English, so that post-secondary vocational work in French would fulfil no useful function. It is at least questionable whether the present system (under which no secondary school subject is taught in French except French) should be continued indefinitely; it causes the French-speaking pupils to lose their facility in their mother tongue, and it fails to give the English-speaking pupils a real command of French. If it is desired to produce truly bilingual citizens, it will be necessary to use French not only as a subject of instruction but as a *medium* of instruction in all secondary school subjects some of the time.

*Technological Education*

The spectrum of possible careers that require formal training and specialization beyond the high school has widened considerably in the mid-twentieth century. One of the excellent features of the revised secondary school programme is that the five-year technical and commercial courses designed to lead to further education should become the basis for a broader range of opportunities for advanced specialization.

In the area of industrial technology, one of the great needs of Canadian industry is for technological specialists, particularly since the industrial advances in Europe have created demands that will keep most of their highly trained technologists at home. In Canada, acceptance of industrial technology courses has been slow: by the public, who have not been too well aware of the industrial hierarchy of specialization and skill and who tend to think of the engineer as the only respectable member of industrial society; and even by industry itself. Now, however, the attitude of industry has changed completely, and companies do the same kind of pre-graduation recruiting at Ryerson as they do at the universities.

We have already mentioned that the greatest increase lately has been in the non-engineering courses. Some of the programmes at present offered, e.g. the Home Economics programme at Ryerson leading to elementary school teaching and to positions as food supervisors, fashion consultants, etc., could be tremendously expanded without filling the needs. Besides, there are new worlds to conquer. Some fields, such as the rapidly growing area of the paramedical services, are barely touched in our existing technological institutes, and some, like computer operating, have not been available at all outside of expensive privately-operated courses. More opportunities should be available for the creative artistic craftsman to learn to work confidently in the medium of his choice.

We believe that the recommendations of the Manpower Training Committee regarding institutes of technology, institutes of trades, and vocational education in the secondary schools, deserve great attention. That committee makes a clear functional differentiation among these institutions. They visualize the vocational stream as providing as much basic general education as possible, along with broadly based vocational skills, but not the highly specialized skills needed in many fields for immediate employment; the trades school as continuing its role in the apprenticeship system and developing a greater role as a kind of substitute for apprenticeship in the non-apprentice trades, giving specialized pre-employment training that is co-ordinated where necessary with on-the-job training; and the institute of technology as continuing and greatly extending its production of highly qualified technological personnel, relying mainly on full-time day courses but also developing day or block release arrange-

ments with industry, and night courses. They speak (as did the presidents in their report on post-secondary education) of the need for co-ordination, planning and direction in this whole area by knowledgeable persons. The recent appointment of a Superintendent of Technical Education and the establishment of the Technological and Trades Training Branch of the Department of Education are important steps in the right direction.

*Adult Education*

Adult education is a field of increasing importance and scope. We are moving towards a society in which education will become a lifetime matter for almost everyone—as it is already for many. The ratio of formal to informal education will increase. Private reading may satisfy the most literate and most intellectually mature members of society, but the majority will need the assistance of organized teaching to improve or change their occupational skills, to acquire the information needed for good citizenship, or to enrich their leisure-time pursuits. All that is being done now—and it is a great deal—is only a small fraction of what will need to be done.

Fortunately this is not an expensive form of education: it can be accomplished in many ways, including the evening use of daytime facilities and through the media of television and film. In terms of organization and expansion, however, it presents one of the important challenges to the educational system.

## 4. CONCLUSION

From the analysis we have made it is clear that the Ontario educational system is a strong one; it has adapted itself to the extraordinary strains of the last twenty years, and is now adapting itself to changes that are even more fundamental, without surrendering its high standards of service and scholarship.

We believe that a large measure of this strength derives from the differentiation of function of the various parts of the system. Institutions at the secondary, technological and university levels have been able to concentrate on doing a good job in their particular field without those uneasy marriages that have been a feature of some other systems.

The American junior college combines functions of all these levels. We do not believe that the junior college should be introduced into the Ontario system. It is an American invention designed to meet various demands that arose as the American educational system developed. It inspired no imitators in Ontario for several reasons. Its "remedial func-

tion"—the repetition of secondary and elementary school courses—was not in demand in this Province; and the "transfer function"—the provision of general arts and science courses paralleling the first two years of university—was partly taken care of, as we have seen, by the fifth year in the Ontario secondary schools. (It is often forgotten that the contrast in the percentage of college-age people reputed to attend college in Ontario and in, for example, Michigan is largely due to the inclusion of junior college students in Michigan and the exclusion of Grade 13 students in Ontario.) At the same time, the development of strong honour courses in the Ontario universities led to the early recognition of a difference *in kind* between secondary school and university instruction. The interchangeability of junior college and university "credits," which is still far from winning general sanction in the United States, is a foreign idea in Ontario.

Frequently in recent months there have been suggestions that work at the university level should be undertaken within the secondary school system; so much has been said by the proponents of this idea that we think it well to state the reasons for our preference for the policy stated by the Prime Minister on March 21st, 1963.

The suggestion most frequently made is that Grade 13 and a new Grade 14 should be given in junior colleges annexed to certain high schools, under the auspices of local boards of education. This proposal is objectionable on several counts. The secondary schools, as we have demonstrated already, are dangerously short of qualified staff for the job they have in hand. They are facing an unremitting expansion of numbers, and their task is complicated by a revision of their curriculum and a vast increase in vocational facilities expressly designed to keep more of their pupils in school longer. The local taxpayers are going to have to pay the operating costs of these vocational units as well as meeting the cost of enlarging, year after year, elementary and secondary schools for an enrolment that shows no signs whatever of levelling off. To expect the school system and the local taxpayers to assume the additional burden of a Grade 14 is not realistic. Apart from that, there is the fact that was mentioned in the Ontario Presidents' Report: if Grade 14 is to be useful at all it must be work at the university level, and local boards of education are not qualified to direct and organize university work. If it were to be well done it would require staff, libraries and laboratories of university calibre to be reduplicated in schools all over the Province, at astronomical cost. Otherwise it ought not to be considered at all, because if it is badly done the secondary schools, the universities, and (most of all) the students will suffer.

Nevertheless, pressures exist in many localities for the establishment of some kind of local post-secondary institution. Many of us have spent a great deal of time discussing proposals of this kind with local groups throughout the Province. Some of the arguments that are advanced in support of these proposals are good ones and some are not. We do not think that the coveting of local prestige, or the personal ambition of individuals, or the desire of boards of trade to bring more purchasing power into the area, or municipal convenience in disposing of land or buildings, should be valid reasons to determine the location of new institutions. We are unable to give much weight to the argument that land is available cheaply because cheap land often goes with a population too sparse to support a post-secondary institution, and in these days the operating expenses of such an institution must be taken very seriously; in less than a decade they exceed the capital outlay.

On the other hand, we have every respect for the sincere desire of citizens for the educational and cultural advantages that come in the wake of such an institution—the better pattern of school attendance, the broadening of parochial attitudes and the wider appreciation of educational values. We respect also the bias in favour of excellence that is endemic in all parts of the Province. We have found that people in centres both large and small want a genuine article in education, not a spurious one. They may be confused about the nature of different educational institutions, but they evince no readiness to be taken in by prestigious terminology. For instance, a degree enjoys a certain prestige because it indicates a recognized level of achievement, but the general sentiment does not favour the granting of degrees for work which is not really college or university work; there is no widespread disposition to insist that studies in fields where skill rather than theoretical knowledge is required should be decorated with degrees. As the Prime Minister has said, there is little point in obtaining a university degree unless it indicates academic excellence. It is indeed fortunate that this respect for excellence exists, since down-grading degrees would be a process both easy and irreversible.

There are four main factors that should be considered when the location of new post-secondary institutions is determined: population, location relative to existing institutions, support of commerce and industry, and initiative and enthusiasm that are backed up by a demonstrated willingness to pay for education of high quality.

We agree with the Manpower Training Committee that the Institute of Technology and the Institute of Trades should be kept separate. The two have different contributions to make to education, both very im-

portant. If they were combined it would be impossible to avoid an invidious comparison between the two kinds of student; and the trades school student ought not to be obliged to work in an environment where he feels like a second-class citizen. The need for more trade schools in Ontario has been documented in the Manpower Training Committee's report.

We also agree with that Committee's recommendation that the existing Institutes of Technology should be expanded and that more Institutes of Technology should be built, dispersed more widely across the Province. We support the present policy whereby they are initially controlled by the Department of Education, but given independence when they have matured sufficiently to have well-established standards.

In addition, it is clear that there is a place for a further adaptation of the Institute of Technology: a post-secondary institution, approved by the Department of Education but under local control, that would concentrate its efforts on providing post-secondary and adult education for the immediate community. We have pointed out already in our discussion of the needs for technological education that the spectrum of careers requiring specialized training beyond the high school has widened to include a great variety of commercial and "service" occupations as well as industrial technology. This trend is going to increase to the point where it will not be possible for a small number of centrally-directed technological institutes to meet the needs; and the demand for different kinds of adult education will surpass the existing offerings. Because the name "Institute of Technology" carries more of an industrial emphasis than we intend, we would prefer, for the new institutions, "College of Technology and Applied Arts." Such an institution would resemble the American community college in its emphasis on terminal vocational courses and adult education, and would be compatible with the Ontario system. Arrangements for transfers of very good students from these colleges either to the Provincial Institutes of Technology or to the universities might well be worked out as experience develops.

We are in favour of local control, with Departmental oversight, because local enthusiasm undoubtedly exists and should be encouraged, and because it seems to us that in this field the advantages of local control outweigh those of centralization. This is not to say that the advice and assistance of the Technological and Trades Training Branch of the Department of Education will not be essential to the planning of the colleges. The initial capital cost should be, in part, an investment by the community in its own welfare, and the community should contribute to the support of its college. With Departmental approval, a College of Technology and Applied Arts would be eligible for assistance under the

Federal-Provincial Technical and Vocational Training Agreement, and it would charge fees, so its operation would not fall entirely either on the Province or the community. Certainly this could be done far less expensively than any of the suggestions that involve duplicating university work, and would benefit more people.

Another reason in favour of local control is that the people on the spot know the needs and resources of the community best. One city may be able to afford to start a college as a full day and evening operation in a special building, while another may start on a more modest scale, perhaps utilizing one of the composite secondary schools for evening classes. One may wish to go in for administrative, clerical and data-processing specialties, while another may find a great demand for creative courses such as industrial design. One may be able to call on teaching assistance from industry, another might co-ordinate its adult classes with a university extension centre.

Departmental approval would ensure a minimum standard, but there would be no exact equivalence of courses in the different colleges unless they wished to make special arrangements to that end, e.g., to establish common examinations with the Institutes of Technology. Specialized post-secondary courses will ordinarily require Grade 12 for admission, and liaison with prospective employers will indicate desirable levels of competence. Departmental approval would also guard against excessive duplication of some courses and neglect of others.

A College of Technology and Applied Arts should represent a democratic effort to improve the opportunities and enlarge the horizons of citizens, both young people and grown-ups. The planning for it should be done by a representative group with intelligence, imagination and leadership. The planners' agenda should include a survey of needs and resources, consultation with the Department of Education, the seeking of expert opinions (especially from educators experienced in the technological field), a projection of student population, an assessment of the availability of competent staff, and a good look at the local library. The possibility of using existing television facilities, and of developing further facilities, would need to be carefully explored.

We make this proposal believing it to be a logical development of the educational system of Ontario. The kind of college we have described is needed to make adequate provision for the thousands of good students whose aptitudes are different from those required for university work. Constantly we hear it said that the universities should take in these students. But the trouble is that if you make the universities do things that are not their proper function, you ruin their chances of doing properly the things that they alone can do. Universities exist to provide a

particular kind of highly specialized experience and training where instruction, as such, is comparatively unimportant; what is important is that new advances in knowledge are being made, and that the same people who are making them are initiating young people into the intellectual frame of reference where such advances are possible; this involves, for both the senior and junior members of a university, a certain kind of skill in quantitative and verbal reasoning.

This sort of thing is not everybody's cup of tea. There are many skills besides the purely academic ones, and our complex, specialized society cannot function without many different varieties of highly-trained personnel. Yet, instead of demanding that opportunities be made available to suit the needs and abilities of all, there is a movement to force more and more young people into the mould of the university whether they are fitted for it or not, and we get the bizarre spectacle of the universities being made to participate in an educational auction sale where the prize goes to the lowest bidder. The truth is that a lowering of university admission requirements would benefit no one. What we must do is to face the obvious fact of specialism in our culture, and the equally obvious fact of different aptitudes and interests in our population, and provide our young people with a wider choice of institutions giving specialized training beyond the secondary school.

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